

**WHAT IS CLAIMED IS:**

1. A process for loading a biological sample comprising; loading a biological sample with a solute by fluid phase endocytosis to produce an internally loaded biological sample.
2. The process of Claim 1 wherein said loading a biological sample by fluid phase endocytosis comprises fusing within the biological sample a first matter with a second matter to produce a fused matter.
3. The process of Claim 2 wherein said first matter comprises the solute.
4. The process of Claim 2 wherein said first matter comprises a vesicle having the solute.
5. The process of Claim 2 wherein said second matter comprises a lysosome.
6. The process of Claim 4 wherein said second matter comprises a lysosome.
7. The process of Claim 2 wherein said fused matter comprises the solute.
8. The process of Claim 6 wherein said fused matter comprises the solute.
9. The process of Claim 2 wherein said loading a biological sample by fluid phase

endocytosis additionally comprises transferring the solute from the fused matter within the biological sample.

10. The process of Claim 8 wherein said loading a biological sample by fluid phase endocytosis additionally comprises transferring the solute from the fused matter within the biological sample.

11. The process of Claim 9 wherein the solute is transferred from the fused matter into a cytoplasm within the biological sample.

12. The process of Claim 10 wherein the solute is transferred from the fused matter into a cytoplasm within the biological sample.

13. The process of Claim 2 wherein said fused matter comprises a lower pH than a pH of the first matter.

14. The process of Claim 12 wherein said fused matter comprises a lower pH than a pH of the first matter.

15. The process of Claim 2 wherein said fused matter comprises a pH of less than about 6.5.

16. The process of Claim 1 wherein said biological sample includes a biological sample selected from a group of biological samples comprising a platelet and a cell.

17. The process of Claim 1 wherein said solute comprises trehalose.

18. A biological sample produced in accordance with the process of Claim 1.

19. A process for preparing a dehydrated biological sample comprising:

providing a biological sample selected from a mammalian species;

loading the biological sample with a solute by fluid phase endocytosis to produce a loaded biological sample; and

drying the loaded biological sample to produce a dehydrated biological sample.

20. The process of Claim 19 wherein said loading of the biological sample with a solute comprises loading of the biological sample with an oligosaccharide from an oligosaccharide solution.

21. A process for loading a solute into a biological sample comprising:

forming within a biological sample a vesicle having a solute; and

lowering the pH of the vesicle to cause the biological sample to be loaded with the solute.

22. The process of Claim 21 wherein said lowering of the pH of the vesicle comprises fusing the vesicle with a lysosome to produce fused matter.

23. The process of Claim 21 wherein said lowering of the pH of the vesicle comprises increasing the permeability of a membrane in the biological sample for facilitating the passage of the solute from the vesicle into the biological sample.

24. The process of Claim 22 wherein said fused matter comprises a pH of less than about 6.5.

25. A biological sample produced in accordance with the process of Claim 21.